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10/528,220	03/18/2005	Mark C. Tevis	SGI-0084-PCT-US	6257

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EXAMINER	
LIGHTFOOT, ELENA TSOY	
ART UNIT	PAPER NUMBER
1792	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/528,220	TEVIS ET AL.	
	Examiner	Art Unit	
	Elena Tsoy Lightfoot	1792	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *11 July 2008*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-13,15-18,20,21 and 24* is/are pending in the application.

4a) Of the above claim(s) *24* is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-13,15-18,20 and 21* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *18 March 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date *10/12/06, 7/11/08*.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

Response to Preliminary Amendment

1. Preliminary Amendment filed on March 18, 2005 has been entered. Claims 14, 19, 22 and 23 have been cancelled. New claim 24 has been added. Claims 1-13, 15-18, 20, 21 and 24 are pending in the application.

Election/Restrictions

2. Applicant's election of Group I, claims 1-13, 15-18, 20 and 21, in the reply filed on July 11, 2008 is acknowledged. Because applicant did not distinctly and specifically point out the supposed errors in the restriction requirement, the election has been treated as an election without traverse (MPEP § 818.03(a)). Group II, Claim 24, is withdrawn from further consideration pursuant to 37 CFR 1.142(b) as being drawn to a nonelected invention.

Specification

3. Amendment to the specification filed on March 18, 2005 has been entered as introducing no new matter.

Drawings

4. The drawings filed on March 18, 2005 are accepted by the Examiner.

Claim Objections

5. Claim 7 is objected to because of the following informalities: "1 5%" should be changed to "15%". Appropriate correction is required.

6. Claim 17 is objected to because of the following informalities: "Outer" should be changed to "outer". Appropriate correction is required.

7. Claim 21 is objected to because of the following informalities: "230 0p" should be changed to "230 ^{0}F". Appropriate correction is required.

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

> The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

9. Claims 1-13, 15-18, 20 and 21 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 1 recites "after the application step (d)", which renders the claim indefinite because step (d) is drying step not application step. For examining purposes the phrase was interpreted as "after drying the article produced after step (e)".

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

12. Claims 1-3, 5-6 and 20 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Kubota et al (US 5698284) and Rockrath et al (US 6835420).

Kubota et al discloses a method for applying a coating composition to an *optical recording medium* (claimed article) by forming three layers 6a, 7 and 8 on a substrate 1 (See Fig. 3), each layer being formed by applying a coating composition comprising radiation curable oligomer (See column 8, lines 1-4, 62-66; column 9, lines 3-7). The coating composition may be solventless or diluted with a **solvent** (See column 9, lines 42-43). In one embodiment the layers may be applied by UV curing a previously applied layer before applying a next layer (See Example B-1). In forth and fifth embodiments (See column 11, line 1), the layers may be applied by **wet-to-wet** coating followed by simultaneous UV curing thereby forming a laminate without creating any *clear* interface between the layers (See column 11, lines 25-28), or the first layer a, the second layer b, and the third layer c may be simultaneously formed by slide coating on the transparent protective layer 1 by e.g. extruding through a slide head and coating so as to put the layers on top of one another in a wet state (See Fig. 4; column 14, lines 9-13). The first layer a, the second layer b, and the third layer c formed by coating are delicately mixed together in the course of air drying or thermodrying, and the interface of layers become apparently eliminated

before radiation curing (See column 14, lines 13-17). Then, a radiation is applied to conduct curing (See column 14, lines 17-18). The elimination of the interface results in improved bending strength (See column 14, lines 18-19). The above coating may be carried out after dilution with a solvent to a suitable extent (See column 14, lines 19-20).

Kubota et al does not expressly teach that wet-to-wet coating followed by simultaneous curing is carried out after drying an applied layer before applying a subsequent layer (Claim 1). However, it is well known in the art that wet-on-wet technique involves forming a multilayer film by applying each layer on top of **dried** but not fully cured layer followed by simultaneous curing, as evidenced by Rockrath et al (See column 1, lines 45-59; column 23, lines 16-24).

Thus, wet-to-wet coating technique of Kubota et al reads on claimed step of *drying* each layer before simultaneous curing.

If it could be argued that the wet-to-wet coating technique of Kubota et al does not employ drying steps, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have dried an applied layer before applying a subsequent layer since Kubota et al teaches that a subsequent layer is applied on either a wet layer or on fully cured layer.

As to claim 2, Kubota et al teaches that the layers 6 may be formed by *gravure* coating, *roll coating*, Komma coating, spin coating, knife coating, *silk screen* coating, T-die coating, slide coating, slit reverse coating or the like (See column 9, lines 38-43).

As to claim 3, limitations of the claim 3 are not addressed as being optional.

As to claims 5-6, examples of the oligomer in Kubota et al include epoxy acrylate, urethane acrylate, polyester acrylate (See column 8, lines 37-39).

As to claim 20, note that "lottery ticket" is only a recitation of the intended use of the claimed invention. It is held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

13. Claims 1-13, 15-18, 20 and 21 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al in view of Maag et al (US 6472026).

Kubota et al, as applied above, does not expressly teach that wet-to-wet coating followed by curing is carried out after drying an applied layer before applying a subsequent layer (Claim 1); the fist and the second layers are cured before applying the third layer (Claim 15).

Maag et al teaches that a process of forming a multilayer structure may be carried out in different ways: (i) by applying the individual lacquer layers in each case wet-on-wet, *optionally* after a short flash-off phase (claimed drying step), and curing the total multi-layer lacquer finish with a single final irradiation operation (See column 8, lines 51-60); (ii) by exposing each lacquer layer of the multilayer structure in each case separately to complete curing (See column 8, lines 60-63); (iii) by curing in each case *two successive* lacquer layers with a single common irradiation operation, and curing the underlying or overlying lacquer layer with a separate irradiation operation (See column 8, lines 63-66); (iv) by effecting *intermediate curing* of in each case **one** or two successive lacquer layers, followed by undertaking the complete curing of the total structure (See column 8, line 66 to column 9, line 5).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed a multilayer structure of Kubota et al by drying each layer

before applying a subsequent layer instead of applying wet layers without intermediate drying or instead of complete curing of each layer, and curing *two successive* layers or three layers with a single common irradiation operation since Maag et al teaches that techniques (i)-(iv) are functionally equivalent to each other.

As to claims 4 and 9, Kubota et al teaches that the coating composition may be diluted with a **solvent** (See column 9, lines 42-43). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have used either water or an organic solvent for diluting the coating composition in Kubota et al because Kubota et al does not limit its teaching to a particular solvent.

Moreover, Maag et al teaches that radiation curable epoxy acrylate, urethane acrylate and polyester acrylate oligomers (See column 3, lines 20-38) may be formulated as water-based or solvent-based coating compositions (See column 3, lines 4-6).

Therefore, one of ordinary skill in the art would have reasonable expectation of success in formulating radiation curable coating compositions of Kubota et al comprising epoxy acrylate, urethane acrylate and polyester acrylate oligomers as high-solids water-based or solvent-based coating compositions.

As to claims 7-8, it is held that concentration limitations are obvious absent a showing of criticality. Akzo v. E.I. du Pont de Nemours 1 USPQ 2d 1704 (Fed. Cir. 1987). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant concentration parameters (including those of claimed invention) in Kubota et al through routine experimentation depending on particular coating composition in the absence of a showing of criticality.

As to claim 20, note that "lottery ticket" is only a recitation of the intended use of the claimed invention. It is held that a recitation of the intended use of the claimed invention must result in a structural difference between the claimed invention and the prior art in order to patentably distinguish the claimed invention from the prior art. If the prior art structure is capable of performing the intended use, then it meets the claim.

14. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al and Rockrath et al or Kubota et al in view of Maag et al, as applied above, further in view of Brack (US 4303696).

As to claim claimed additive, Kubota et al teaches that *silicone* is added to the outermost layer to improve the **slip** property (See column 17, lines 30-50).

Kubota et al fails to teach that a slip additive, a release additive and a wax are added to the third composition.

Brack teaches that the materials having good **slip or release** properties, are generally lipophilic, and can comprise *waxes*, silanes, siloxanes, *silicones*, fluorocarbons, and the like (See column 1, lines 63-66). Thus, silicone has both slip and release properties. Therefore, silicone of Kubota et al reads on both claimed slip additive and a release additive because claim 12 does not recite them being different additives.

As to a combination of silicone and wax, it is well settled that it is prima facie obvious to combine two compositions each of which is taught by the prior art to be useful for the same purpose, in order to form a third composition which is to be used for the very same purpose. Therefore, it is prima facie obvious to combine silicone and wax to provide slip, release properties.

15. Claim 13 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al and Rockrath et al or Kubota et al in view of Maag et al, as applied above, further in view of Ishikawa et al (US 5795642).

The cited prior art fails to teach that the drying steps (b) and (d) are performed by a dryer at a temperature of from 230 ^{0}F to 390 ^{0}F in the presence of a large flow of air volume.

However, it is a common knowledge in the art that drying off a solvent may be carried out by hot air, as evidenced by Ishikawa et al (See column 16, lines 48-52) (Ishikawa et al teaches that drying of applied coating layer may be carried out by contacting the layer with

heated gas (hot air), and the degree of drying can be controlled by adjusting the temperature and the feed rate (flow speed) of hot air). It would have been obvious to one of ordinary skill in the art at the time the invention was made to have determined the optimum values of the relevant drying parameters (including those of claimed invention) in the cited prior art through routine experimentation depending on particular coating composition in the absence of a showing of criticality.

16. Claims 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al and Rockrath et al or Kubota et al in view of Maag et al, as applied above, further in view of Suzuki et al (US 5573831), and further in view of Mizuguchi et al (JP2002067483).

The cited prior art fails to teach that an image of a water based ink is printed on the first layer (Claim 16) or on the second layer (Claim 17).

Suzuki et al teaches that in an optical recording medium, an image of a water based ink may be printed on a resin layer (See column 8, lines 16-20).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have formed an image in an optical recording medium of cited prior art by printing a water based ink on a resin layer since Suzuki et al teaches that in an optical recording medium, an image of a water based ink may be printed on a resin layer.

Suzuki et al fails to teach that the image in a plastic card may be printed on either first layer or a second layer.

Mizuguchi et al teaches that image may be formed on a plastic card by printing a water based ink on different layers of a laminate (See Abstract).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to have printed an image on any layer in a laminate of the cited prior art depending on particular use of a final product since Mizuguchi et al teaches that image may be formed on a plastic card by printing a water based ink on different layers of a laminate.

17. Claim 20 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al and Rockrath et al or Kubota et al in view of Maag et al, as applied above, further in view of Tulley et al (US 6688976).

The cited prior art fails to teach that the method may be used for making lottery ticket.

Tulley et al teaches that lottery games include any number of variations and combinations (See column 4, lines 12-13). A lottery ticket may be formed as one or more cards which are made of paper, cardboard, plastic, or any other suitable material and may include identification and game playing information printed thereon (See column , lines). Alternatively, lottery tickets may be represented magnetically, optically, or electronically, for example, lottery tickets may be embodied as **magnetic stripes on cards**, patterns on **magneto-optical media**, and/or bit patterns in a smart card (See column 4, lines 15-26). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used a method of making optical magnetic card of Kubota et al for making lottery tickets since Tulley et al teaches that lottery tickets may be embodied as magnetic stripes on cards, patterns on magneto-optical media.

As to claims 10-12, the Applicants' specification discloses that the first, second and third compositions can optionally contain other components including, but not limited to, a surfactant, a thickener, an absorbent, a pigment or dye, which are **commonly used in the art** (See Published

Application, P23). Thus, the limitations of dependent claims 10-12 are described in the specification as being not subject matter of claimed invention.

18. Claim 21 is rejected under 35 U.S.C. 103(a) as being unpatentable over Kubota et al and Rockrath et al or Kubota et al in view of Maag et al, as applied above, further in view of Ishikawa et al, Suzuki et al and Mizuguchi et al, Tulley et al, and Brack.

Note that claim 21 incorporates limitations of claim 13 (Ishikawa et al), of claim 17 (Suzuki et al and Mizuguchi et al) and of claim 20 (Tulley et al). Therefore, claim 21 would be obvious over the cited art for the reasons discussed above.

As to electron beam, Brack teaches that radiation curable prepolymer materials are curable by UV radiation as well as by an *electron beam* radiation (See column 1, lines 14-21).

Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to have used electron beam for curing a radiation curable oligomer (prepolymer) materials in Kubota et al with the expectation of providing the desired cured layer since Brack teaches that radiation curable prepolymer materials are curable by UV radiation as well as by an *electron beam* radiation.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Elena Tsoy Lightfoot whose telephone number is 571-272-1429. The examiner can normally be reached on Monday-Friday, 9:00AM - 5:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Timothy Meeks can be reached on 571-272-1423. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications

may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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Art Unit 1792

October 1, 2008

/Elena Tsoy Lightfoot/